

CLAIMS

What is claimed is:

- 5     1.     A connection system, comprising:
- a device;
- a cable assembly having a cable and a cable connector disposed at an end
- of the cable, the cable connector being configured to connect to the device; and
- a retaining clip configured to secure the cable connector to the device
- 10     when the cable connector connects to the device, the retaining clip including:
- a main body defining a cavity and a central axis which
- extends through the cavity, the main body being configured to
- receive and hold the cable connector, and
- a set of latching arms attached to the main body, each
- 15     latching arm extending in a direction substantially parallel to the
- central axis and being configured to latch the main body to the
- device when the main body receives and holds the cable connector
- and when the cable connector connects to the device.
- 20     2.     The connection system of claim 1 wherein the set of latching arms includes:
- multiple extending members, each extending member having a first end
- which attaches to the main body and a second end which is configured to grasp
- the device when latching the main body to the device.
- 25     3.     The connection system of claim 2 wherein the multiple extending members
- include:
- a first extending member; and

a second extending member, the first and second extending members being disposed on opposite sides of the main body to facilitate simultaneous deflection of the first and second extending members toward the main body and toward each other in response to compression by a user's hand when de-latching the main body from the device.

4. The connection system of claim 1 wherein the main body defines a cable slot that extends (i) in a direction that is substantially parallel to the central axis, and (ii) along an entire length of the main body to enable the main body to receive and hold the cable connector.
5. The connection system of claim 4 wherein the cavity defined by the main body has a cavity diameter, and wherein the cable slot defined by the main body is substantially smaller than the cavity diameter.
6. The connection system of claim 1 wherein the main body defines, as the cavity, a substantially cylindrical space; and wherein the central axis extends substantially through a center of the substantially cylindrical space.
7. The connection system of claim 6 wherein the main body further defines a cable aperture at one end of the substantially cylindrical space, and wherein the cable aperture has a diameter that is narrower than that of the substantially cylindrical space.
8. The connection system of claim 1 wherein the cable assembly further includes a DC transformer connected to the cable, wherein the cable connector is a coaxial power supply jack, and wherein the main body of the retaining clip is configured to slide around and capture the coaxial power supply jack.

9. A retaining clip for securing a cable connector to a device when the cable connector connects to the device, the retaining clip comprising:
- 5 a main body defining a cavity and a central axis which extends through the cavity, the main body being configured to receive and hold the cable connector; and
- 10 a set of latching arms attached to the main body, each latching arm extending in a direction substantially parallel to the central axis and being configured to latch the main body to the device when the main body receives and holds the cable connector and when the cable connector connects to the device.
10. The retaining clip of claim 9 wherein the set of latching arms includes:
- 15 multiple extending members, each extending member having a first end which attaches to the main body and a second end which is configured to grasp the device when latching the main body to the device.
11. The retaining clip of claim 10 wherein the multiple extending members include:
- 20 a first extending member; and  
a second extending member, the first and second extending members being disposed on opposite sides of the main body to facilitate simultaneous deflection of the first and second extending members toward the main body and toward each other in response to compression by a user's hand when de-latching the main body from the device.
- 25 12. The retaining clip of claim 9 wherein the main body defines a cable slot that extends (i) in a direction that is substantially parallel to the central axis, and (ii) along an entire length of the main body to enable the main body to receive and hold the cable connector.

13. The retaining clip of claim 12 wherein the cavity defined by the main body has a cavity diameter, and wherein the cable slot defined by the main body is substantially smaller than the cavity diameter.
- 5
14. The retaining clip of claim 9 wherein the main body defines, as the cavity, a substantially cylindrical space; and wherein the central axis extends substantially through a center of the substantially cylindrical space.
- 10
15. The retaining clip of claim 14 wherein the main body further defines a cable aperture at one end of the substantially cylindrical space, and wherein the cable aperture has a diameter that is narrower than that of the substantially cylindrical space.
- 15
16. The retaining clip of claim 15 wherein the main body further defines an interface aperture at another end of the substantially cylindrical space, wherein the interface aperture has a diameter that is at least as wide as that of the substantially cylindrical space, and wherein each latching arm extends from the main body and along the substantially cylindrical space in a direction toward the interface
- 20
- aperture.
17. The retaining clip of claim 9 wherein the main body and the set of latching arms are integrally formed of a solid, injection molded, non-conductive material.
- 25
18. A retaining clip for securing a cable connector to a device when the cable connector connects to the device, the retaining clip comprising:

a main body defining a cavity and a central axis which extends through the cavity, the main body being configured to receive and hold the cable connector; and

means for latching the main body to the device when the main body receives and holds the cable connector and when the cable connector connects to the device.

19. A method for using a retaining clip which is adapted to secure a cable connector to a device, the method comprising:

capturing the cable connector within a cavity defined by a main body of a retaining clip;

connecting the cable connector to the device; and

inserting a set of latching arms of the retaining clip through a set of holes defined in the device to latch the main body to the device.

20. The method of claim 19, further comprising:

compressing the set of latching arms toward each other to de-latch the main body from the device.

21. The method of claim 19 wherein the cable connector is disposed at an end of a cable, and wherein capturing the cable connecting within the cavity defined by the main body of the retaining clip includes:

passing a portion of the cable through a cable slot defined along an entire length of the main body of the retaining clip until the portion of the cable resides in the cavity defined by the main body of the retaining clip; and

sliding the cable connector into the cavity defined by the main body of the retaining clip.